Amendments to the Claims.

CLAIM

1. (Currently amended) An apparatus for determining the velocity of a projectile moving along a trajectory, said apparatus comprising of:

a first sensing plane perpendicular to said trajectory comprising a plurality of light

emitting devices and a plurality of light sensitive detectors, the light emitting device

being position to emit light beams to form a first light curtain in a plane perpendicular to

said trajectory, the light sensitive detectors being position to form a first detecting plane

perpendicular to said trajectory and parallel to said first light curtain, the said first

detecting plane to be position close to the first light curtain so as to be able to detect

reflected light from the first light curtain, the said reflected light as caused to be reflected

as the projectile passes the first light curtain, the light sensitive detectors having the

means for producing a first signal indicative of the entry of the projectile into the first

light curtain;

a second sensing plane perpendicular to said trajectory comprising a plurality of light

emitting devices and a plurality of light sensitive detectors, the light emitting device

being position to emit light beams to form a second light curtain in a plane perpendicular

to said trajectory, the light sensitive detectors being position to form a second detecting

plane perpendicular to said trajectory and parallel to said second light curtain, the said

second detecting plane to be position close to the second light curtain so as to be able to

detect reflected light from the second light curtain, the said reflected light as caused to be

reflected as the projectile passes the second light curtain, the light sensitive detectors

having the mean for

producing a second signal indicative of the entry of the projectile into the second light

curtain, the said second sensing plane being position parallel to said first sensing plane

and aligned with said trajectory a distance apart; [[and]]

means responsive to said first and second signal for measuring the interval between the

passage of said projectile through said first sensing plane to said second sensing plane for

calculating a velocity corresponding to the measured time and the distance between said

first and second sensing plane and displaying said calculated speed[[.]]; and

an enclosure with a plurality of openings along one planar face, said openings to coincide

with said light emitting devices and said light sensitive detectors of said first and said

second sensing plane and said light emitting devices and said light sensitive detectors are

contained within said enclosure below said openings.

2. (Original) The apparatus of claim 1, wherein the light emitting devices comprises of infrared

light emitting diodes.

3. (Original) The apparatus of claim 1, wherein the light sensitive detectors comprises of

infrared sensitive detectors with amplification and ambient light rejection circuitry.

4. (Original) The apparatus of claim 1, wherein the detecting planes means comprises a plurality

of openings with dimensional characteristics of a cylinder having a length much longer than the

diameter of the opening to cause rejection of stray reflected light from being detected and

allowing reflected light parallel to detecting plane from entering

5. (Currently amended) A method for determining the velocity of a projectile moving along a

trajectory, said method comprising the steps of:

molding a synthetic resin material to obtain said enclosure with a plurality of openings in one

planar face;

emitting first parallel light beams in a first direction perpendicular to said trajectory to
form a first light curtain;

detecting reflected light from first light curtain as projectile passes said first light curtain;

deriving a first signal indicative of said projectile entering said first light curtain;

emitting a second parallel light beams in a second direction perpendicular to said
trajectory to form a second light curtain;

detecting reflected light from second light curtain as projectile passes said second light
curtain;

deriving a second signal indicative of said projectile entering said second light curtain;

determining the velocity of said projectile from said first and second signal comprises the
steps of;

recording the number of periods, C, generated by a clock source between said first signal
and said second signal;

calculating the velocity of said projectile by the following formula:

$\underline{X}$ = velocity in miles per hour.

C

Listing of Claims

Claim 1	Currently amended
Claim 2	Original
Claim 3	Original
Claim 4	Original
Claim 5	Currently amended